Amendments to the Claims:

Please cancel claims 19-28 and amend claims 1-8, 10, 11 and 15-17 as shown in the following list of claims.

This listing of claims will replace all prior versions and listings of claims in the application:

1. (currently amended) In a communications system having a communications ~~line~~ link with a master transceiver at a first end and a slave transceiver at a second end, each transceiver having a noise reduction system, a timing recovery system and at least one equalizer, all converging at startup of the system, a startup protocol comprising ~~the step of~~:

for each transceiver, separating the convergence of the equalizer and the timing recovery system from the convergence of the noise reduction system.

2. (currently amended) The startup protocol of claim 1 wherein the step of separating the convergence of the equalizer and the timing recovery system from the convergence of the noise reduction system comprises ~~the steps of~~:

converging the equalizer and the timing recovery system of the slave while converging the noise reduction system of the master;

upon completion of converging the equalizer and the timing recovery system of the slave and the noise reduction system of the master, converging the equalizer and the timing recovery system of the master while converging the noise reduction system of the slave; and

upon completion of converging the equalizer and the timing recovery system of the master and the noise reduction system of the slave; reconverging the noise reduction system of the master.

3. (currently amended)   The startup protocol of claim 2 wherein ~~the step of~~ converging the equalizer and the timing recovery system of the master while converging the noise reduction system of the slave further comprises the step of resetting the noise reduction system of the master.

4. (currently amended)   The startup protocol of claim 2 wherein ~~the step of~~ converging the equalizer and the timing recovery system of the master while converging the noise reduction system of the slave further comprises the step of freezing the timing recovery system of the slave.

5. (currently amended) The startup protocol of claim 1 wherein each of the noise reduction systems includes an echo canceller.

6. (currently amended) The startup protocol of claim 5 wherein each of the noise reduction systems further includes a NEXT cancellation system.

7. (currently amended) A startup protocol for use in a communications system having a plurality of transceivers, one transceiver acting as a master and another transceiver acting as slave, each transceiver having a noise reduction system, a timing recovery system and at least one equalizer, said protocol comprising ~~the steps of~~ :

executing a first stage during which the timing recovery system and the equalizer of the slave are trained and the noise reduction system of the master is trained;

executing a second stage during which the timing recovery system and the equalizer of

the master are trained and the noise reduction system of the slave is trained; and

executing a third stage during which the noise reduction system of the master is retrained.

8. (currently amended) The startup protocol of claim 7 further ~~comprises the steps of~~ comprising:

transitioning from the first stage to the second stage; and

transitioning from the second stage to the third stage.

9. (original) The startup protocol of claim 8 wherein each stage is of a fixed time duration and the transitioning between stages occurs upon completion of the time duration.

10. (currently amended) The startup protocol of claim 9 wherein the time duration of the stages ~~are~~ is substantially equal.

11. (currently amended) The startup protocol of claim 8 wherein ~~the step of~~ transitioning from the first stage to the second stage comprises ~~the steps of~~:

transmitting a signal from the slave to the master;

detecting the signal at the master; and

ceasing transmission from the master.

12. (original) The startup protocol claim 11 wherein the transmission of the signal from the slave occurs upon completion of the training of the timing recovery system and the equalizer of the slave.

13. (original) The startup protocol of claim 8 wherein ~~the step of~~ transitioning from the second stage to the third stage comprises the steps of:

transmitting a signal from the master to the slave;

detecting the signal at the slave; and

continuing transmission from the slave.

14. (original) The startup protocol of claim 13 wherein the transmission of the signal from the master occurs upon completion of the training of the timing recovery system and the equalizer of the master.

15. (currently amended) A startup protocol for use in a communications system having a master transceiver at one end of a ~~twisted-wire-pair~~ communications link and a slave transceiver at the opposite end of the ~~twisted-wire-pair~~ communications link, each transceiver having a near-end noise reduction system, a far-end noise reduction system, a timing recovery system and at least one equalizer, said protocol comprising ~~the steps of~~:

    during a first phase:

        maintaining the master in a half-duplex mode during which it transmits a signal but does not receive any signals,

        maintaining the slave in a half-duplex mode during which it receives the signal from the master but does not transmit any signals,

        converging the master near-end noise reduction system, adjusting the frequency and phase of the signal received by the slave such that the frequency and phase are synchronized with the frequency and phase of the signal transmitted by the master,

        converging the equalizer of the slave;

    during a second phase:

        maintaining the slave in a half-duplex mode during which it transmits a signal but does not receive any signals,

        maintaining the master in a half-duplex mode during which it receives the signal from the slave but does not transmit any signals,

6

freezing the frequency and phase of the slave,

converging the slave near-end noise reduction system,

adjusting the phase of the signal received by the master such that the phase is synchronized with the phase of the signal transmitted by the slave,

converging the equalizer of the master; and

during a third phase:

maintaining the slave in a full-duplex mode such that the slave transmits and receives signals,

maintaining the master in a full-duplex mode such that the master transmits and receives signals,

reconverging the master near-end noise reduction system.

16. (currently amended) The protocol of claim 15 wherein the near-end noise reduction systems include an echo canceller and a NEXT cancellation system, the far-end noise reduction system includes a FEXT cancellation system and, during the first stage, the step of converging the master noise reduction system comprises the steps of adjusting the coefficients of the master echo canceller and NEXT cancellation system and, during the second stage, the step of converging the slave noise reduction system comprises the steps of adjusting the coefficients of the slave echo canceller and NEXT cancellation system and the protocol further comprises the steps of:

during the first phase, converging the slave far-end noise reduction system by adjusting the coefficients of the FEXT cancellation system; and

during the second phase, converging the master far-end noise reduction system by adjusting the coefficients of the FEXT cancellation system.

17. (currently amended) The protocol of claim 15 wherein the master near-end noise reduction system includes an echo canceller and, during the first phase, the step of converging the master near-end noise reduction system comprises the step of adjusting the coefficients of the echo canceller

and the protocol further comprises ~~the step of~~:

during the second phase, discarding the coefficients of the echo canceller.

18. (original) The protocol of claim 15 wherein the master near-end noise reduction system includes a NEXT cancellation system and, during the first phase, the step of converging the master near-end noise reduction system comprises the step of adjusting the coefficients of the NEXT cancellation system and the protocol further comprises the step of:

during the second phase, discarding the coefficients of the NEXT cancellation system.

19-28. (canceled)